Form No. 104628

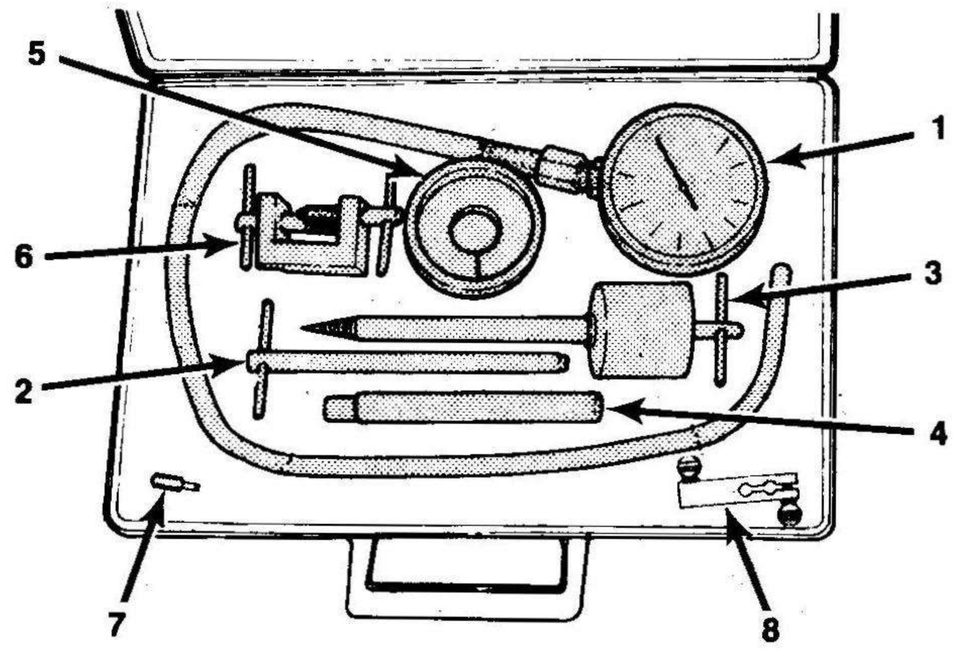
OWATONNA TOOL COMPANY
OWATONNA, MINNESOTA 55060, U.S.A. — TELEX: 29-0777

PARTS LIST AND SERVICE INSTRUCTIONS FOR | TOOLS AND EQUIPMENT ... **7146**

CARBURETOR SERVICE SET
MOTORCRAFT MODEL 2700VV/7200VV

PARTS LIST

Item No.	Part No.	No. Req'd.	Description
1	**7146-A**	1	Vacuum Gauge *(Calibrated in inches of water)*
2	**7146-B**	1	Meter Jet Adjusting Tool
3	**7146-C**	1	Jet Plug Remover Tool
4	**7146-D**	1	Jet Plug Replacer Tool
5	**7146-E**	1	Choke Adjustment Tool
6	**7146-F**	1	Pivot Pin Tool
7	**7146-G**	1	Tamper Resistant Torx Bit
8	**7146-J**	1	Dial Indicator Stand



NOTE: Use OTC No. 17271 Dial Indicator (not included in this kit) or any standard one inch travel dial indicator.

SERVICE PROCEDURES

JET PLUG REMOVAL

NOTE: Open venturi valve and install clean rag against valve to hold in position. This will prevent bending the metering rod during adjustment or removal of metering jet or plugs.

1. Position the pointed end of the jet plug removal tool (7146-C) against the brass jet plug (Figure 1). Tap firmly on the end of the removal tool with a hammer until the pointed end pierces the brass plug.
2. Rotate the handle of removal tool (7146-C) clockwise to engage several of the tapered threads into the brass plug.
3. Slide the weight back sharply against the handle of the tool to remove the brass plug (Figure 2).

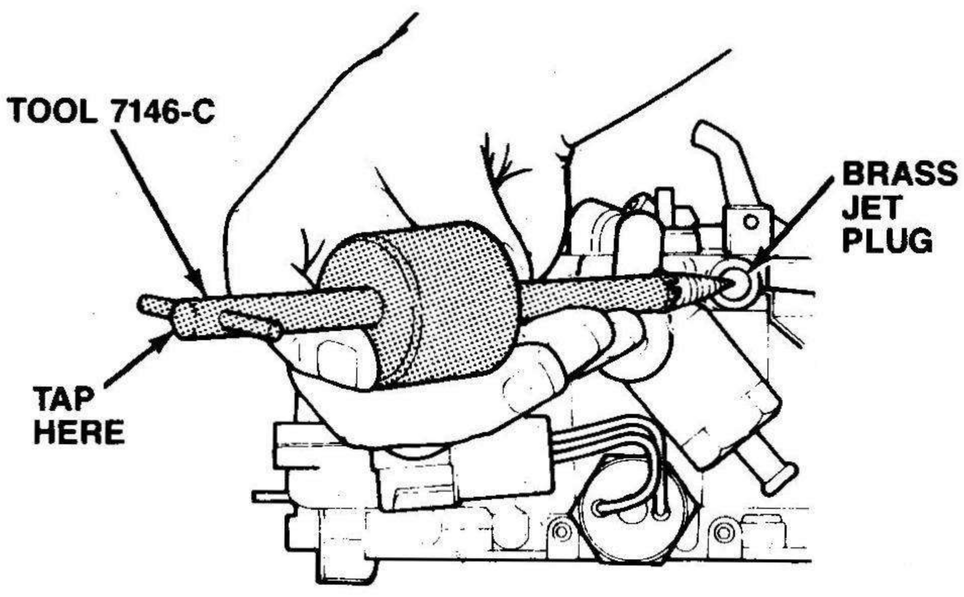


FIGURE 1

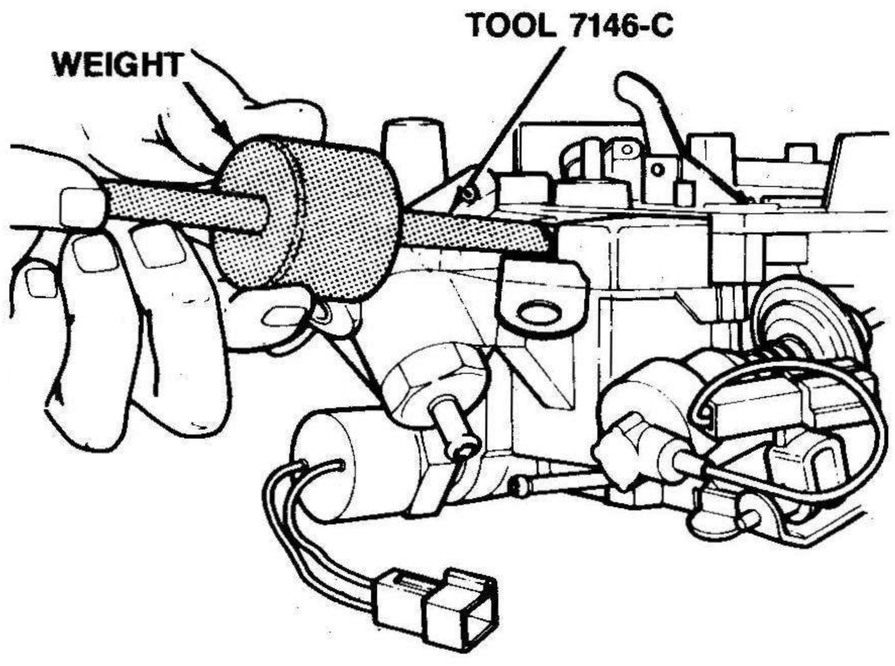


FIGURE 2

PARTS LIST AND SERVICE INSTRUCTIONS (CONT'D)

METERING JET ADJUSTMENT

1. After the jet plug has been removed, insert metering jet adjusting tool (7146-B) into slotted head of jet.

   NOTE: *Do not* turn or remove the jet until you read and understand the remainder of step 1.

   Turn the jet **clockwise**, counting the number of turns required to bottom the metering jet in the casting (Figure 3). Record the number of turns to the nearest ¼ turn for reference when installing jet.

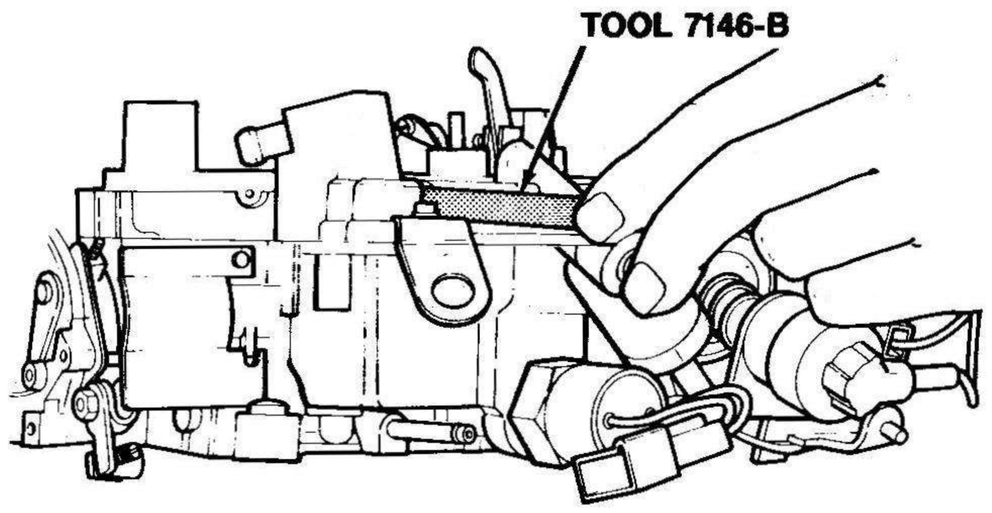


FIGURE 3

2. After the metering jet has been bottomed out, it may be removed by turning the tool counterclockwise.

   NOTE: It may be necessary to use small piece of wire to remove the jet from the end of the gallery after the threaded portion of the galley is cleared.

3. Insert the new metering jet into the galley and position the tool (7146-B) into the slotted head of the jet.
4. Turn the metering jet clockwise until the jet bottoms out. Back out the jet the same number of turns recorded in step 1 above. This will position the jet to the original factory setting.

JET PLUG REPLACEMENT

1. Position the plug on the end of the jet plug replacer tool (7146-D) (Figure 4).
2. Position the replacer tool into the galley in the carburetor.
3. Tap lightly on the end of the tool with a hammer to properly seat the plug (Figure 5).

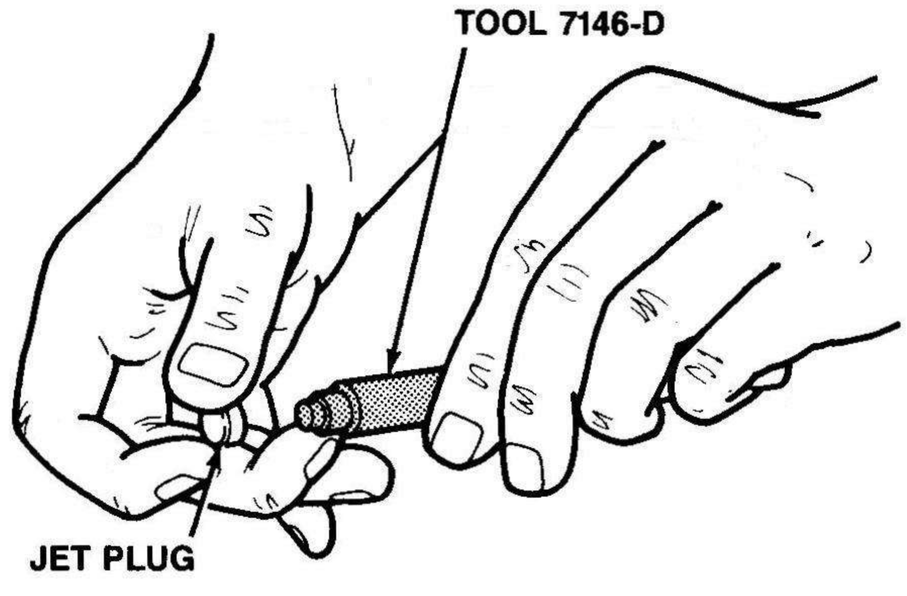


FIGURE 4

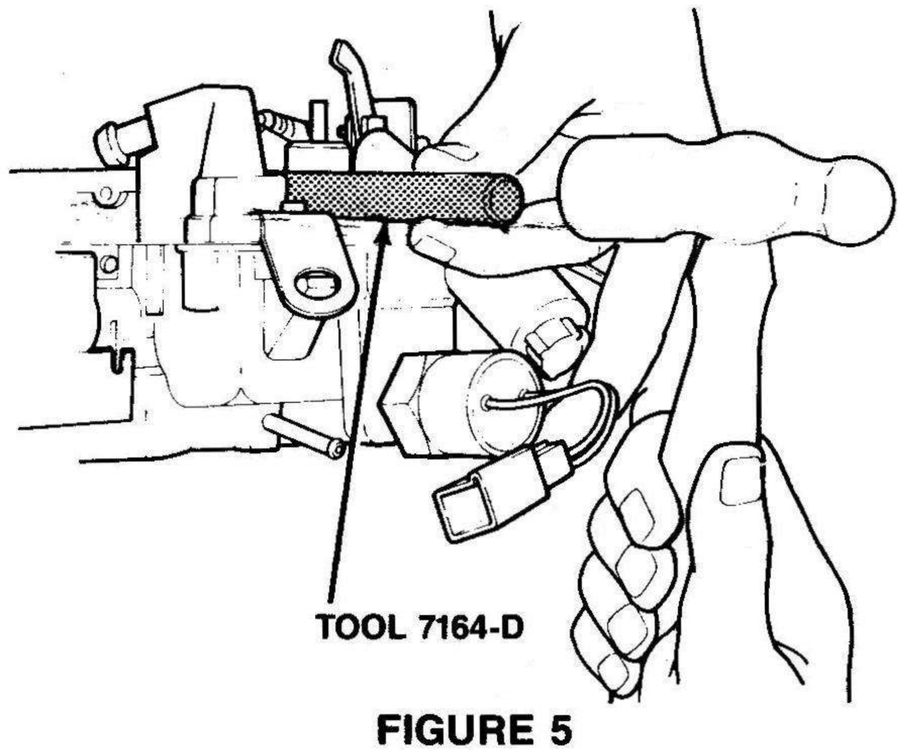


FIGURE 5

TAMPER RESISTENT TORX BIT

The 1981 model of the Variable Venturi carburetors use special tamper resistent screws to secure the venturi cover on the top body of the carburetor. Tool No. 7146-G is included in this set for use in removal of these screws. See Figure 6 for location.

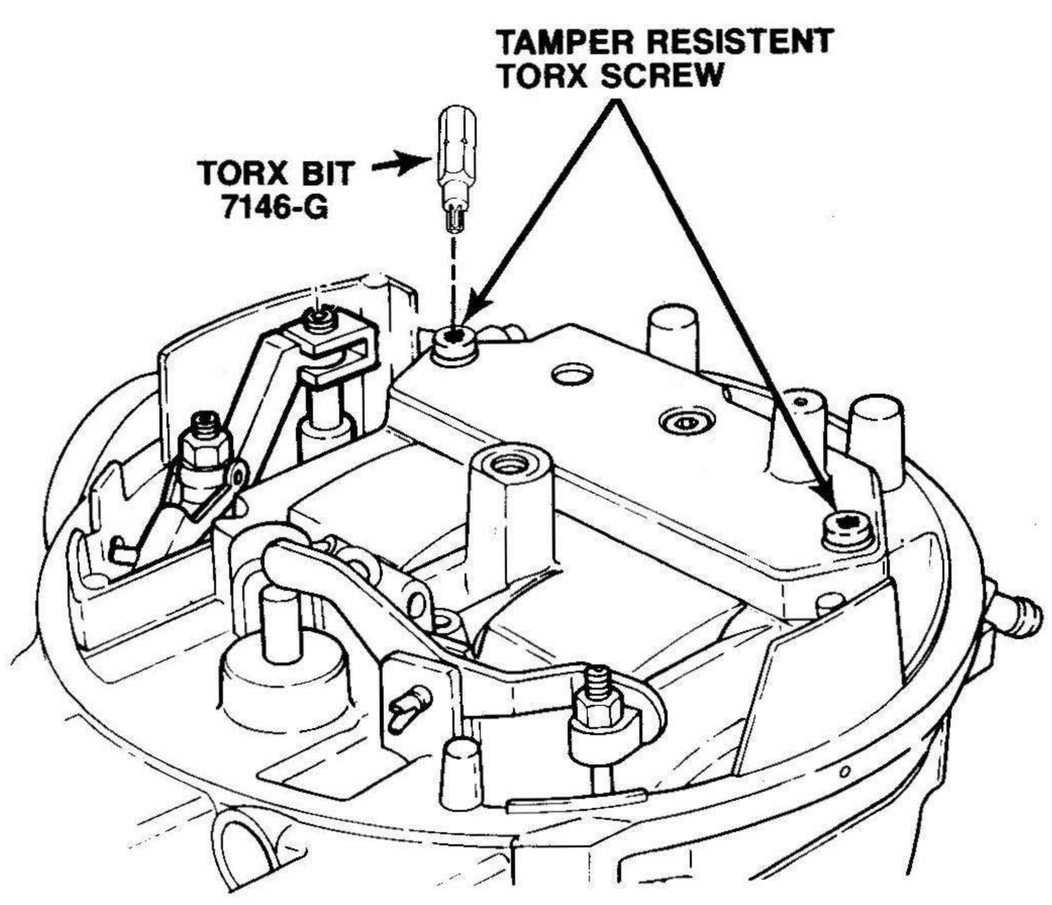


FIGURE 6

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PIVOT PIN TOOL

1. Using the pivot pin tool (7146-F), press the tapered plugs out of the venturi valve pivot pins. See Figure 7. Note the positions of the tool in Figure 7. The word "remove" should be facing toward you and located on the inside of the venturi valve mounting bracket.

   NOTE: Pivot pin plugs are removed by pressing them to the outboard side of the carburetor.

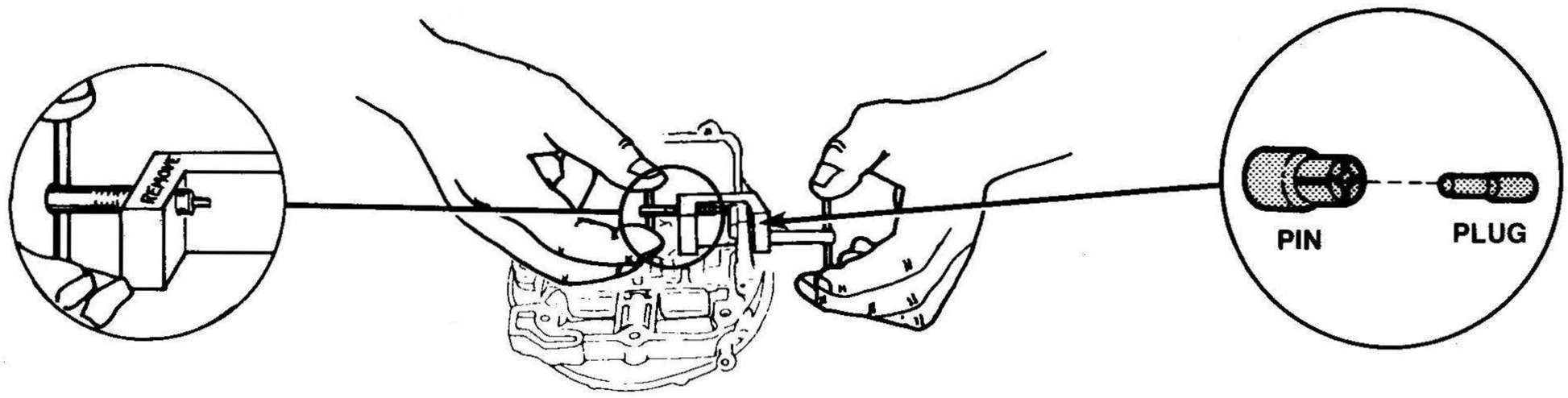

FIGURE 7

2. Reposition the pivot pin tool (7146-F) on the outside of the pivot pin bracket as shown in Figure 8. Note the position of the tool in Figure 8. The word "remove" should be facing toward you.
3. Insert the tip of the "remove" screw into the pivot pin and turn to force the pivot pin out of the mounting bracket toward the center of the carburetor.

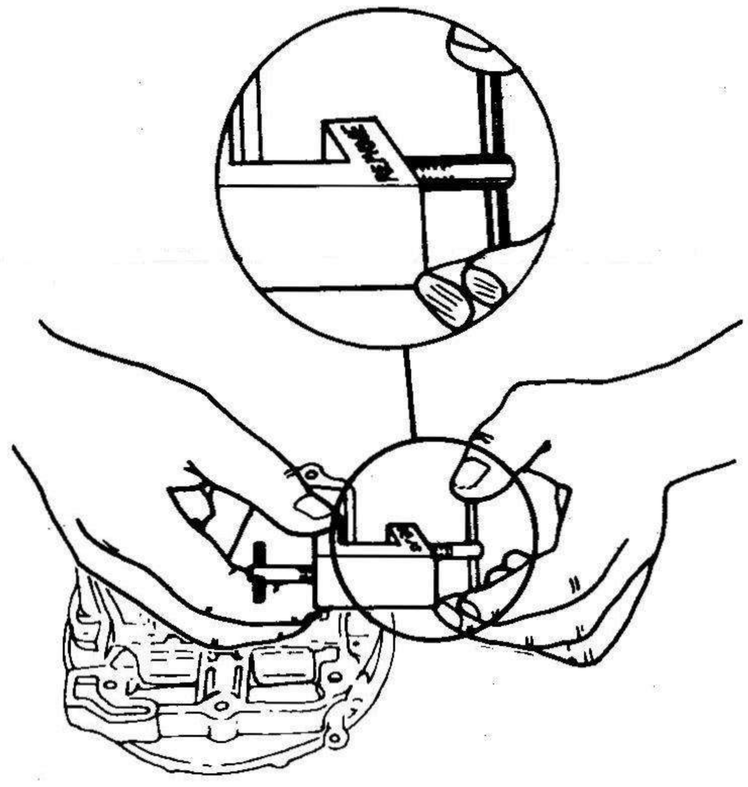

FIGURE 8

REASSEMBLY

4. To reassemble, push the new pivot pins in place by hand.
5. Insert the *pivot plug* into the *pivot pin* as far as it will go by hand.
6. Position the pivot pin tool (7146-F) as shown in Figure 9. Note the position of the tool in Figure 9. The word "replace" should be facing toward you and located to the outside of the venturi valve mounting bracket.

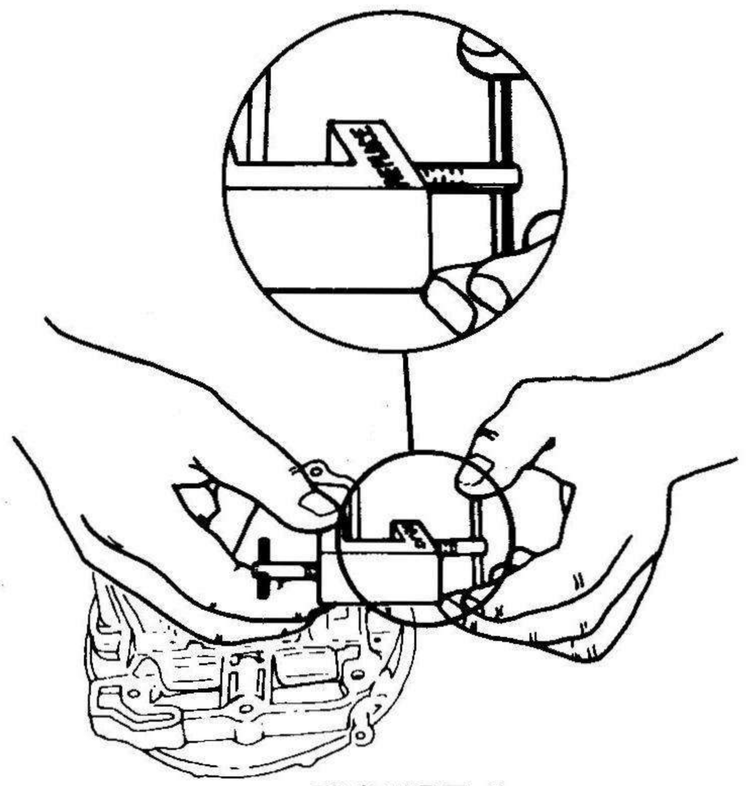

FIGURE 9

PARTS LIST AND SERVICE INSTRUCTIONS (CONT'D)

IMPORTANT

For the following adjustments, make sure all specifications used are for the correct model and year of the carburetor you are working on.

COLD ENRICHMENT ROD CHOKE ADJUSTMENT

1. Remove the choke cap.
2. Set the fast idle cam on the high cam step.
3. Install the tubular engagement side of the choke adjustment tool (7146-E) as shown in Figure 10. Rotate to seat the cold enrichment rod (see Figure 11). Recheck to insure that the cold enrichment rod is seated.

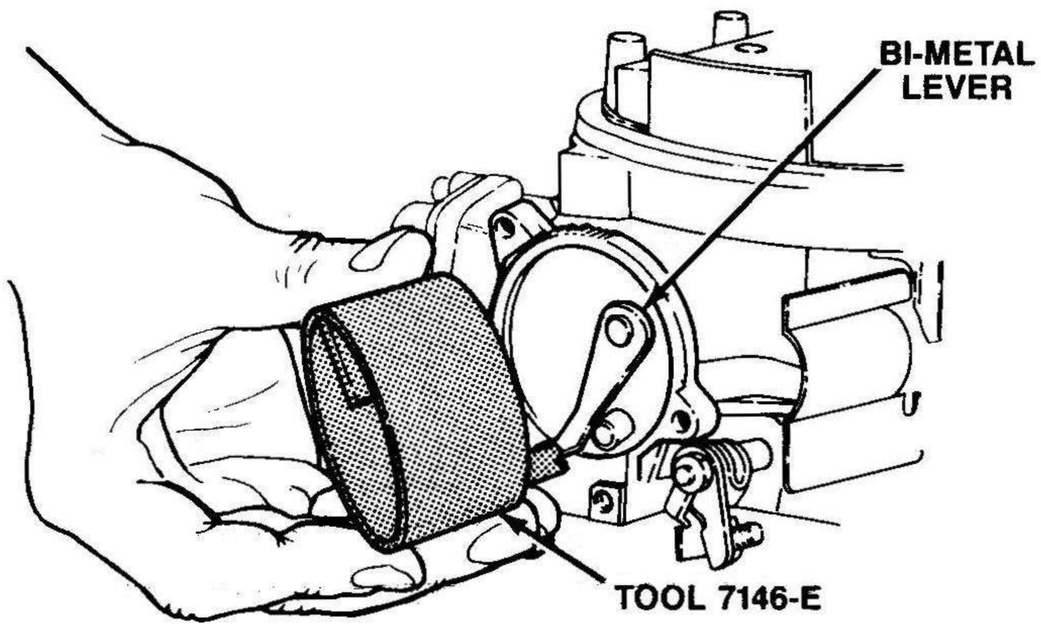

FIGURE 10

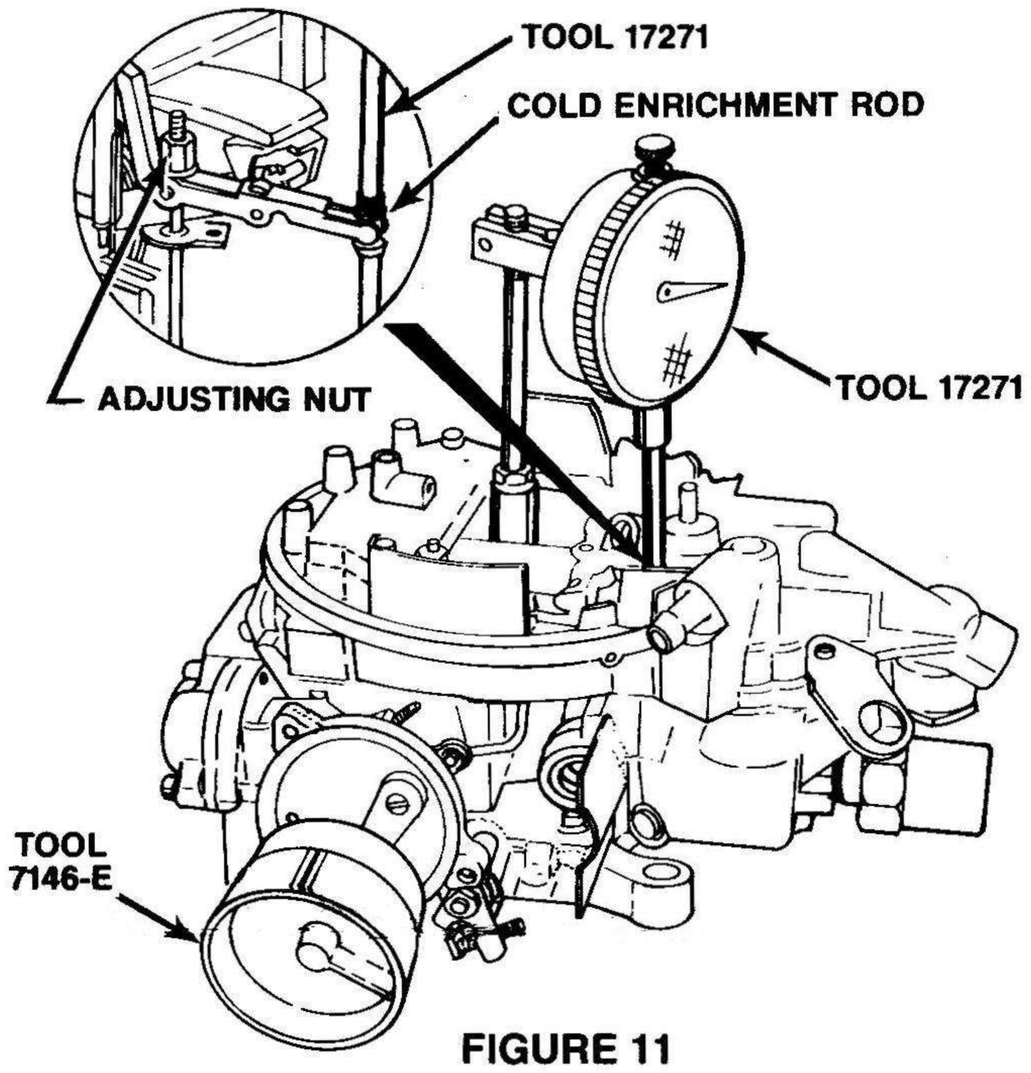

FIGURE 11

4. Attach dial standoff (7146-J) to an OTC 17271 dial indicator (see Figure 12). Any standard one inch travel dial indicator will also work.
5. Attach the dial indicator with stand, to the air cleaner center bolt (Refer back to Figure 11).

   NOTE: Make sure the dial indicator shaft is seated against the top of the cold enrichment rod.

   Zero the dial indicator. Raise the choke adjustment tool (7146-E) slightly and release it to make sure the needle on the dial indicator resets to zero.
6. Remove the choke adjustment tool (7146-E). Turn the tool around to the opposite side and engage the ridge at the outside edge into the bi-metal lever of the choke. Rotate the tool upward until the mark on the tool is opposite the index mark on the choke housing (Figure 13). Dial indicator should read to service specifications as stated in service manual.
7. Adjust the choke linkage by turning the adjustment nut clockwise to increase or counter clockwise to decrease height until the dial indicator shows the specified reading (refer back to Figure 11).

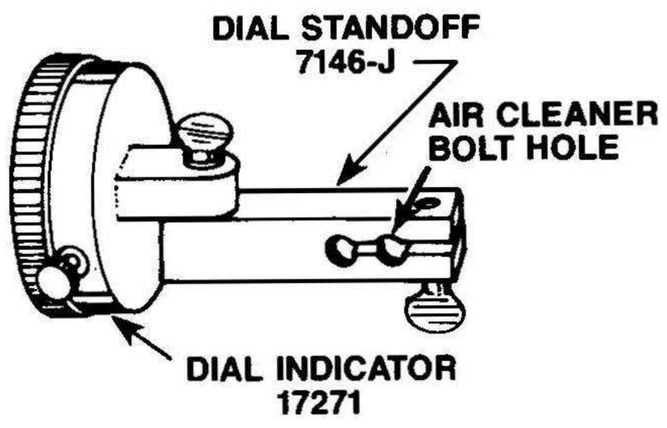

FIGURE 12

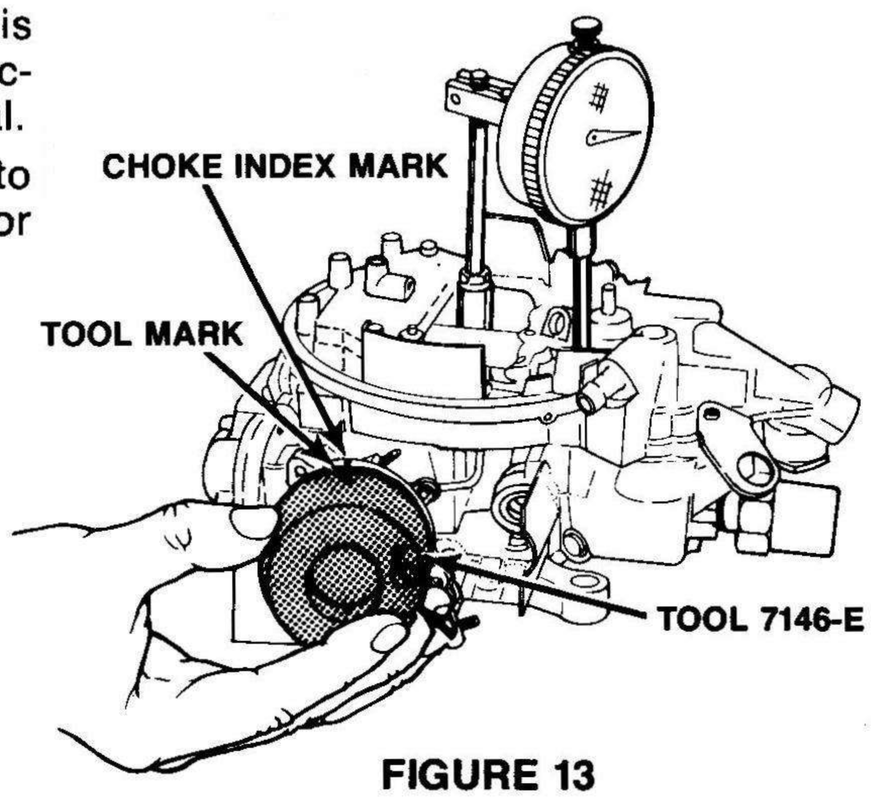

FIGURE 13

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PARTS LIST AND SERVICE INSTRUCTIONS CONT'D

TOOLS AND EQUIPMENT **7146**

CONTROL VACUUM REGULATOR (CVR) ADJUSTMENT

NOTE: The cold enrichment rod choke adjustment must be checked or reset before performing the control vacuum regulator adjustment.

1. Leave the dial indicator in place. **DO NOT** reset the zero reading on the indicator. Manually hold the choke pull-off diaphram rod in the retracted position (see Figure 14)
2. Press down on the CVR rod until it bottoms on its seat (see Figure 14). Read the downward travel on the dial indicator. If the dial indicator does not show the proper specifications, (see specifications manual) adjust as follows:
   a. Place a 3/8" box end wrench over the CVR adjusting nut to prevent turning (see Figure 14).
   b. Using a 3/32" allen wrench, turn the CVR rod counterclockwise to increase the travel and clockwise to decrease.

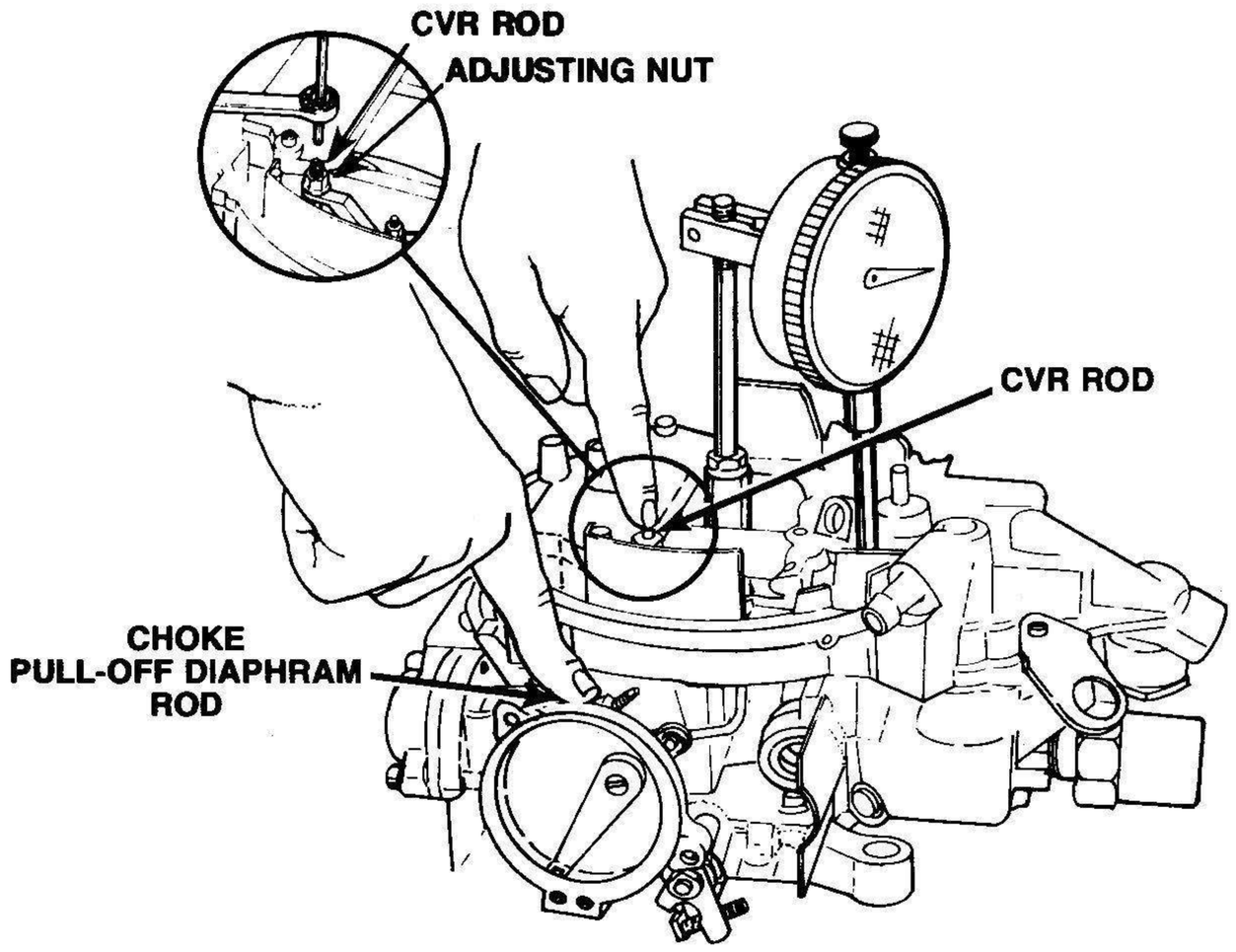


FIGURE 14

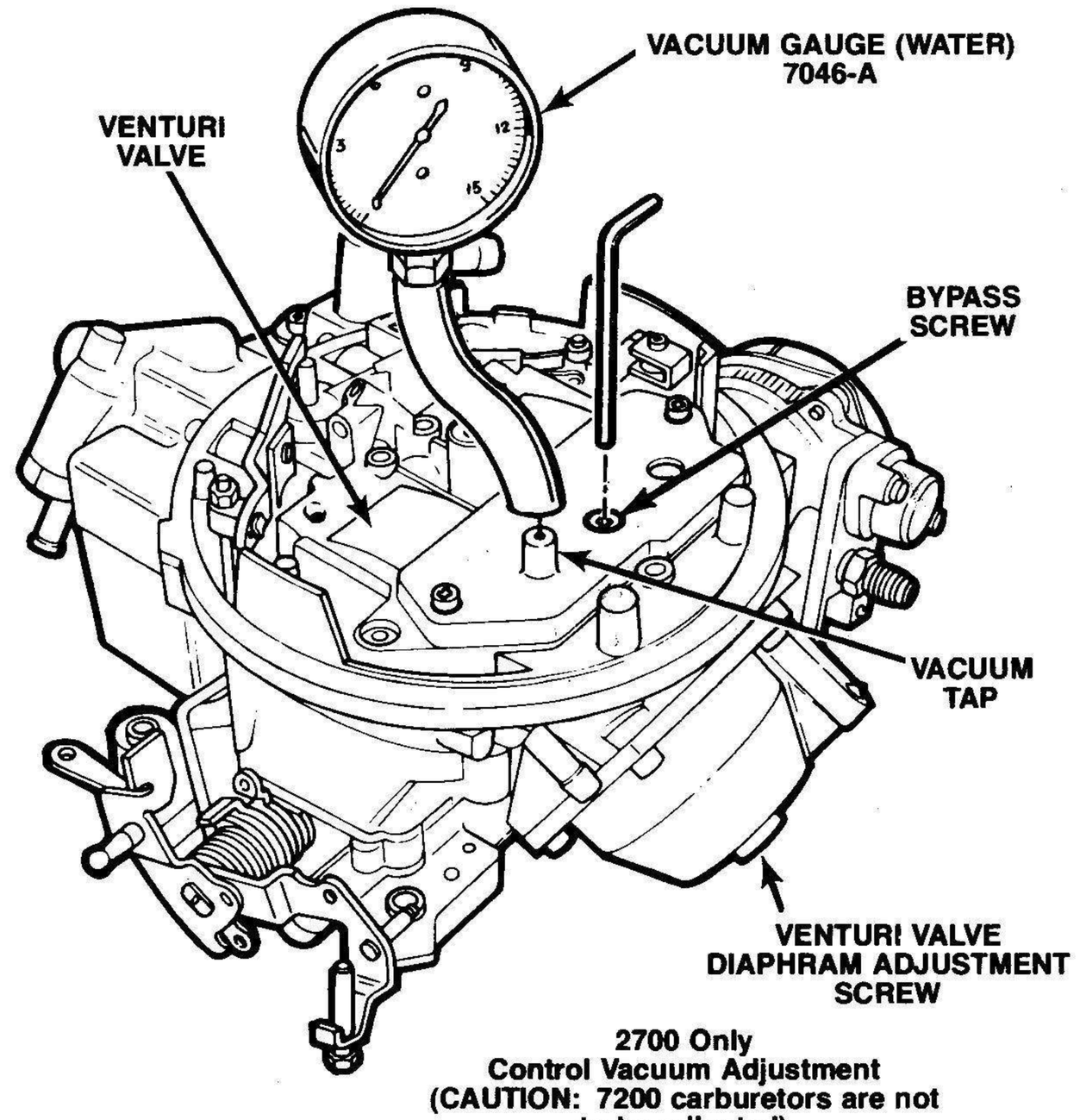
CONTROL VACUUM ADJUSTMENT (2700 only)

1. Install carburetor on engine and complete all connections.
2. Start the engine. Allow it to reach operating temperature and adjust the idle to specification.
3. Install a tachometer. Install vacuum gauge (7046-A) to the vacuum top outlet located on top of the venturi valve cover (see Figure 15).
4. Apply parking brake (disconnect automatic brake release if so equipped). Adjust engine idle speed to 500 RPM in Drive.
5. Hold the venturi valve closed and adjust the bypass screw (see Figure 15) until you get a reading of 9 inches of water on the vacuum gauge.

NOTE: You may have to remove a plug from the top of the venturi bypass to expose the bypass screw. To remove the plug, remove the venturi cover and push the plug out with a small punch. *DO NOT* drill out the plug.

NOTE: It may be necessary to reset the idle speed while making the control vacuum adjustment.

6. Release the venturi valve, cycle throttle lightly and check idle speed (500 RPM).
7. Turn the venturi valve diaphragm adjustment screw until vacuum drops to 6 inches of water. Do not hold the venturi while making this adjustment. (You may have to remove a protective plug to expose the adjustment screw).
8. Repeat step #6.
9. Install new plugs and remove the vacuum gauge.



2700 Only
Control Vacuum Adjustment
(CAUTION: 7200 carburetors are not to be adjusted)

FIGURE 15